PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Hiroshi SAKAI

Appln. No.: 10/015,795

Confirmation No.: 4397

Filed: December 17, 2001

Docket No: Q67694

Group Art Unit: 2614

Examiner: Binh Tieu

For: CELLULAR COMMUNICATION SYSTEM WHICH ENABLES IMPROVED INTERFERENCE MONITORING AND METHOD OF MONITORING INTERFERENCE

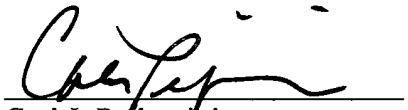
SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of $500.00 is attached **(previously paid on December 23, 2005)**. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,



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Date: August 29, 2006

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For: CELLULAR COMMUNICATION SYSTEM WHICH ENABLES IMPROVED INTERFERENCE MONITORING AND METHOD OF MONITORING INTERFERENCE

RESPONSE TO NOTICE OF NON-COMPLIANT

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

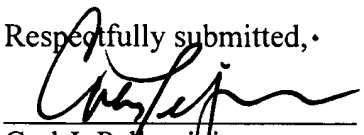
Sir:

In response to the Notification of Non-Compliant Appeal Brief dated July 31, 2006, Applicant is submitting herewith a new Appeal Brief that obviates the deficiency noted in the Notification.

In particular, Applicant has addressed the issues identified in the Notification. Specifically, Applicant has corrected the brief to include a concise explanation of the subject matter, Identify each independent claims involved in the appeal and set the structure, material or acts described in the specification". Applicant respectfully submits that the new brief complies with the rules and therefore requests an Examiner's Answer.

Although Applicant believes that no fee is due, the USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

Table of Contents

I. REAL PARTY IN INTEREST

The real party in interest is NEC Corporation, by virtue of assignment executed by all of the inventors (Appellant, hereafter), on December 7, 2001 and recorded by the Assignment Branch of the U.S. Patent and Trademark Office on December 17, 2001 (at Reel 012389, Frame 0057).

II. RELATED APPEALS AND INTERFERENCES

To the knowledge and belief of Appellant, the assignee, and the undersigned, there are not other appeals or interferences before the Board of Appeals and Interferences that will directly affect or be affected by the Board's decision in the instant Appeal.

III. STATUS OF CLAIMS

Claims 1-19 are all the claims pending in the application and are the subject of this appeal. Claims 1-19 stand finally rejected. A copy of the claims on appeal is set forth in the attached Claims Appendix.

IV. STATUS OF AMENDMENTS

With the filing of this Brief all Amendments and Responses have been entered and considered by the Examiner. A Response under 37 C.F.R. §1.116 was filed on August 25, 2005, in Response to the Final Office Action dated May 25, 2005. In an Advisory Action dated September 26, 2005, the Examiner states that the Response filed August 25, 2005 had been considered but did not place the application in condition for allowance.

The application was originally filed with 15 claims on December 17, 2001. An Amendment under 37 C.F.R. §1.111 was filed in response to an Office Action dated September 9, 2004; claims 16-19 were added via this amendment

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Appellant's invention as recited in, for example, independent claims 1, 8, 9, and 15 is related to a cellular communication system providing interference monitoring and method thereof.

Appellant's invention provides improved interference monitoring. Detailed interference measurements are desirable for multiple reasons (page 6, lines 8-11), to include system design and system operation. The cellular communication system of the present invention includes a cell station and a maintenance terminal. The cell station of the present invention, and of conventional communications systems, provides communication service for a personal station (Fig. 1; page 11, line 25 - page 12, line 8)

In conventional interference detection, the timings of interference measurements are only made at predetermined intervals and not while user messages are being communicated. Additionally, to obtain a detailed interference profile, interference data is collected by an apparatus positioned near a cell station and measurements are made and recorded continuously for a given duration (page 5, line 20 - page 6, line 7).

The maintenance terminal, according to the present invention, includes a user interface for receiving a request for the interference monitoring. The request is transmitted to the cell station(s) and the cell station monitors interference in response to the request (page 13, lines 8-13; claim 1).

In another embodiment, the maintenance terminal sends first and second requests, while the cell station provides the communication service in response to the first and provides monitoring of interference in response to the second request ([0021]; original claim 4). The

method of operating a cellular communication system comprises: receiving requests; and providing communication service continuous monitoring of interference, in response to the requests (page 9, lines 23-27; original claim 4).

It is preferable that the method according to the above exemplary embodiment is further composed of receiving a request, and then providing communication service, and receiving a request and then continuously monitoring the interference wave and recording an interference profile independent of communication signal transmission, in response to said request (page 9, lines 23-27; Amendment filed December 9, 2004: original claim 4).

Claim 1. A cellular communication system consistent with an exemplary embodiment of the present invention comprises: a cell station (Fig. 1, CS1) which provides a communication service for a personal station (Fig. 1, PS; see also page 12, lines 5-8); said cell station executing continuous interference monitoring during a requested period (page 7, lines 5-10; page 7, lines 22-27; page 9, line 7-8; page 9, lines 23-27; page 12, lines 9-13; page 15, lines 9-13); said cell station receiving said requested period from a maintenance terminal and then producing interference data representative (page 9, lines 23-24; page 13, lines 10-13) of at least one property of an interfering wave, or said interference data representative of an absence of an interference wave (page 7, lines 8-10, 21; page 17, lines 24-25); and said maintenance terminal requesting said requested period (page 7, lines 23-27) and producing a data record of at least one interference profile based on said at least one property (page 17, lines 10-18).

Claim 4. The cellular communication system according to claim 1 (above), wherein said maintenance terminal sends first and second requests (page 7, lines 22-23), and said cell station

provides said communication service in response to said first request, and monitors said interference data in response to said second request (page 7, lines 23-27).

Claim 8. A cellular communication system consistent with an exemplary embodiment of the present invention comprises: a plurality of cell stations (Fig. 1, CS1, CS2, CSn) which provide a communication service for a personal station (Fig. 1, PS; see also page 12, lines 5-8); page 8, lines 14-19), each of said cell stations continuously monitoring interference during a requested period (page 7, lines 5-10; page 7, lines 22-27; page 9, line 7-8; page 9, lines 23-27; page 12, lines 9-13; page 15, lines 9-13) to produce interference data at least representative of an electric field intensity of an interfering wave (page 9, line 7-22; page 15, lines 2-8); said cell station receiving said requested period from a maintenance terminal (page 9, lines 23-24; page 13, lines 10-13); said maintenance terminal which requests said requested period (page 7, lines 23-27) and receives said interference data from each of said cell stations, produces a data record of an interference profile and determines an incoming direction of an interfering wave based on said interference data (page 17, lines 10-18; page 19, line 22 to page 20, line 8).

Claim 9. A method of operating a cellular communication system consistent with an exemplary embodiment of the present invention comprises: providing a communication service for a personal station by a cell station (Fig. 1, PS; CS1; see also page 12, lines 5-8); continuously monitoring of an interfering wave during a requested period by said cell station (page 7, lines 5-10; page 7, lines 22-27; page 9, line 7-8; page 9, lines 23-27; page 12, lines 9-13; page 15, lines 9-13); requesting of said request period by a maintenance terminal (page 16, lines 6-10); said cell station receiving said requested period from a maintenance terminal and then producing an interference data representative (page 9, lines 23-24; page 13, lines 10-13) of at least one

property of an interfering wave (page 7, lines 8-10, 21; page 17, lines 24-25); and producing a data record of an interference profile based on said at least one property (page 17, lines 10-18).

Claim 15. A method of operating a cellular communication system consistent with an exemplary embodiment of the present invention comprises: providing a communication service for a personal station by a plurality of cell stations (Fig. 1, PS; CS1, CS2, CSn; see also page 12, lines 5-8); page 8, lines 14-19); continuously monitoring of an interfering wave during a requested period by said plurality of cell stations (page 7, lines 5-10; page 7, lines 22-27; page 9, line 7-8; page 9, lines 23-27; page 12, lines 9-13; page 15, lines 9-13); requesting said request period by a plurality of maintenance terminals (page 7, lines 23-27; page 16, lines 6-10); said plurality of cell station receiving said requested period from a maintenance terminal and then producing interference data at least representative (page 9, lines 23-24; page 13, lines 10-13) of electric field intensities of an interfering wave by each of said plurality of cell stations (page 9, line 7-22; page 15, lines 2-8); and determining an incoming direction of said interfering wave based on said interference data (page 17, lines 10-18; page 19, line 22 to page 20, line 8).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 2, 5, 8, 9 and 15-17 stand finally rejected as allegedly being unpatentable over *Meredith, et al.* (U.S. Patent No. 6,052,605) in view of *Do* (U.S. Patent No. 6,321,087) or *Jang* (U.S. Patent No. 6,282,408) under 35 U.S.C. §103(a).

Claims 3, 4 and 10-12 stand finally rejected as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Shimura* (U.S. Patent No. 4,837,801) under 35 U.S.C. §103(a).

Claims 6, 7, 10, 13 and 14 stand finally rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Iwata* (U.S. Patent No. 5,845,209).

Claims 6, 7, 10, 13 and 14 also stand finally rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Sakamoto, et al.* (U.S. Patent No. 5,408,514).

Claims 18 and 19 stand finally rejected as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Tayloe, et al.* (U.S. Patent No. 5,095,500) under 35 U.S.C. §103(a).

No other grounds of rejection or objection currently are pending. This appeal is directed to claims 1-19.

VII. ARGUMENT

A. Claims 1, 2, 5, 8, 9 and 15-17 are patentable over *Meredith* in view of *Do* or *Jang*.

As noted above claims 1, 2, 5, 8, 9 and 15-17 have been rejected as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* under 35 U.S.C. §103(a). It is respectfully submitted that claims 1, 2, 5, 8, 9 and 15-17 are patentable over *Meredith* in view of *Do* or *Jang*, at least for the following reasons.

Claims 1 and 8 require,"...cell station executing continuous interference monitoring ...during a requested period...said maintenance terminal requesting said requested period...". Applicant's independent claims are distinguishable from *Meredith* at least by claiming the recording of interference data initiated in response to a request received by a cell station from a maintenance terminal. While this request is independent of communication signal transmission, it is not necessary for said recording to be done to the exclusion of, or in the absence of, communication signal transmission. *Meredith* fails to teach the maintenance terminal requested recording period of interference data required by claims 1 and 8.

Particularly, *Meredith* discloses a communication operations system which monitors interference for immediate signal transmission integrity. "An object of the present invention is improved assessment of potential interference during communication between mobile radio units and...base sites..." (*Meredith,* col. 1, lines 56-59). *Meredith* discloses interference monitoring for present time, online assessment of potential interference distribution across multiple radio channels. When potential interference is detected, an alternate channel for signal transmission is selected (*Meredith,* col. 2, lines 61-67). *Meredith* monitors all antennae at multiple frequencies at predetermined periodic intervals (10 times per second) (col. 2, lines 22-26 and 44-46).

Meredith does not disclose *Applicant*'s claimed continuous interference monitoring only during a requested period, said requested period requested by a maintenance terminal. The Examiner acknowledges the absence of this teaching in *Meredith*, and therein relies on secondary reference *Do* or secondary reference *Jang* to teach or suggest this element (FOA page 2). *Applicant* addresses the shortcoming of each secondary reference in turn.

The Examiner asserts that *Do* teaches a monitoring system in a wireless telecommunication system wherein a base station can monitor call(s) based on a request from an operator or a maintenance terminal. The Examiner cites, specifically, to *Do* at col. 2, lines 52-63 (FOA page 2). *Do* teaches maintaining a record of a call (col. 1, lines 22-24). The record of the call identifies the path (base stations BS, mobile station MS, mobile switching center MSC, common channel signaling network CCN, and public switched telephone network PSTN) which the call has taken, or which the call is taking (col. 1, lines 16-24; FIG. 1; col. 2, lines 1-11; col. 2, lines 52-53). The record of the call is exclusive of interference data, or signal quality (col. 2, lines 20-51). Multiple points along the path transmit their call data record for a specific call to an MSC upon a request or automatically upon detection of an abnormality (col. 3, lines 20-22; col. 2, lines 52-57).

Do does not disclose *Applicant*'s claimed continuous interference monitoring only during a requested period, said requested period requested by a maintenance terminal. In fact, *Do* teaches away from *Applicant's* claim. *Do* teaches continuous tracking of a call path, said *recorded* call path data being transferred to an MSC upon request, or upon detection of an abnormality [perhaps excess interference]. At least for failing to teach or suggest, alone or in combination, the element of continuous interference monitoring only during a requested period,

said requested period requested by a maintenance terminal, Applicant respectfully requests that the rejection of claims 1 and 8 over *Meredith* in view of *Do* under 35 U.S.C. §103(a) be reversed by the members of the Board.

The Examiner asserts that *Jang* teaches an apparatus and method for measuring air interference of a base station by using a maintenance terminal and wherein air interference measurements can be continuously repeated till a stop time has been reached. The Examiner cites specifically to *Jang* at col. 5 (FOA page 3). *Jang* teaches automatically measuring and storing channel power from air interference measurement set (AIMS) in each of six sector/paths (FIG. 4; col. 5, lines 1-15; col. 4, lines 47-51), switching over to each one of six sector/paths when a switch command is received by the decoder, said command sent from a control computer (FIG. 4; col. 5, lines 12-20). The method automatically progresses to the next measurement, i.e., frequency, when the 6 switches have been executed (FIG. 4; col. 5, lines 21-25). "Repeating of steps [measuring, storing and switching], is continuously performed until the time when a stop command is input by a measurement operator" (col. 5, lines 26-28). *Jang* fails to teach or suggest continuous interference monitoring for a requested period, said requested period requested by a maintenance terminal. Rather, *Jang* teaches periodic measurements of each sector/path in sequential order, continuing said periodic sequential measurements until the operator of the monitoring device provides a stop command.

If a parallel port is not available, switching is performed by hand via a toggle switch (col. 4, lines 43-44). *Jang* fails to teach or suggest continuous interference monitoring for a requested period, said requested period requested by a maintenance terminal. Rather, *Jang* teaches continuous monitoring of a given sector/path until the monitoring operator manually switches the

monitoring apparatus to a second sector/path. *Jang* fails to teach or suggest continuous interference monitoring for a requested period. At least for failing to teach or suggest, alone or in combination, the element of continuous interference monitoring only during a requested period, said requested period requested by a maintenance terminal, Applicant respectfully requests that the rejection of claims 1 and 8 over *Meredith* in view of *Jang* under 35 U.S.C. §103(a) be reversed by the members of the Board.

Claims 9 and 15 require analogous subject matter to that discussed above in the patentability argument for claim 1. Therefore, Applicant respectfully requests that the members of the Board reverse the rejection of claims 9 and 15 at least for the reasons discussed above. Applicant respectfully requests that the members of the Board reverse the rejection of claims 2, 5, 16 and 17 at least for their dependence upon an allowable claim.

B. Claims 3, 4, and 10-12 are patentable over *Meredith* in view of *Do* or *Jang* and further in view of *Shimura*.

As noted above, claims 3, 4, and 10-12 have been rejected as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Shimura* under 35 U.S.C. §103(a). It is respectfully submitted that claims 3, 4, and 10-12 are patentable over *Meredith* in view of *Do* or *Jang* and further in view of *Shimura* at least for the following reasons.

Claim 4. The Examiner "takes official notice" that it is well known to control switching elements remotely from a user terminal to perform monitoring or testing after which it can be changed to a normal communication servicing mode (FOA, page 4). The Examiner asserts that furthermore, OAM of OAM&P systems are known to provide provisioning, operations, administrations/authorizations and maintenance remotely to network elements based on

transmitted signals. And finally, the Examiner asserts that the combination as applied in the rejection of claim 1, provides reference to support the official notice.

As evidenced by the four different combinations of six different patent references asserted against the rejected apparatus and method claims for interference monitoring in a communication system (FOA), there is a multitude of cellular communication and interference monitoring systems and methods thereof. A brief summary of the teachings of each the four references applied against claim 4 illustrates multiple operations, systems, and protocols for cellular communication and system monitoring.

Meredith discloses a communication operations system which monitors interference for immediate signal transmission integrity (*Meredith* abstract; col. 1, lines 56-59).

Do teaches a monitoring system in a wireless telecommunication system wherein a base station can monitor call(s) based on a request from an operator or a maintenance terminal to obtain a call record information which includes handoffs (*Do* abstract; Figs. 2 and 3; col. 1, lines 20-45). *Do* fails to teach or suggest interference monitoring.

Jang teaches an apparatus and method for measuring air interference of a base station by using a maintenance terminal and wherein air interference measurements continuously repeated till a stop command is received (Fig. 4, s6; s7; col. 5, lines 9-30).

Shimura teaches monitoring a control wave, and rerouting communication when interference on the control wave is detected to prevent interference on the communication wave. Analogous to the operation protocol of *Meredith* with the additional subject matter of a control wave for interference assessment and system evaluation (*Shimura* abstract; col. 2, lines 32-41; Fig. 3).

As shown by the summary of the teachings above, multiple communication systems and monitoring thereof are practiced by those of ordinary skill in the art. As shown by the discussion below the above references, alone or in combination, fail to teach or suggest the subject matter required by claim 4.

Meredith discloses a communication operations system which monitors interference for immediate signal transmission integrity. "An object of . . . [*Meredith's*] present invention is improved assessment of *potential* interference during communication between mobile radio units and...base sites..." (*Meredith,* col. 1, lines 56-59). *Meredith* discloses interference monitoring for present time, online assessment of potential interference distribution across multiple radio channels. When potential interference is detected, an alternate channel for signal transmission is selected (*Meredith,* col. 2, lines 61-67). *Meredith* fails to teach a maintenance terminal requested recording of interference data via *a second* request.

In contrast, claim 4 requires, the cellular communication system according to claim 1 (above), wherein said maintenance terminal sends first and second requests, and the cell station provides the communication service in response to said first request, and monitors said interference data in response to said second request. *Meredith* fails to teach or suggest a maintenance terminal sending a first request and a second request, wherein the cell station provides communication service in response to said first request and monitors said interference data in response to the second request. *Meredith* fails to disclose *Applicant*'s claimed first request for communication service and second request for interference monitoring via the maintenance terminal. *Applicant* addresses the shortcoming of each secondary reference to provide the deficiency of *Meredith*, in turn.

Do teaches continuous tracking of a call path, said *recorded* call path data being transferred to an MSC upon request, or upon detection of an abnormality (Do abstract; Fig. 5; col. 1, lines 58-59; col. 1, lines 39-45). Clearly, *Do* fails to teach a maintenance terminal requested recording of interference data via *a second* request.

Jang teaches automatically measuring and storing channel power from air interference measurement set (AIMS) in each of six sector/paths (FIG. 4; col. 5, lines 1-15; col. 4, lines 47-51), switching over to each one of six sector/paths when a switch command is received by the decoder, said command sent from a control computer (FIG. 4; col. 5, lines 12-20). The method automatically progresses to the next measurement, i.e., frequency, when the 6 switches have been executed (FIG. 4; col. 5, lines 21-25). "Repeating of steps [measuring, storing and switching], is continuously performed until the time when a stop command is input by a measurement operator" (col. 5, lines 26-28). *Jang* fails to teach or suggest *Applicant*'s claimed first request for communication service and second request for interference monitoring via the maintenance terminal. Rather, *Jang* teaches periodic measurements of each sector/path in sequential order, continuing said periodic sequential measurements until the operator of the monitoring device provides a stop command. *Jang* fails to teach a maintenance terminal requested recording of interference data via *a second* request.

The teachings of *Shimura* are analogous to the teachings in *Meredith*, in that *Shimura* teaches a system and method to monitor interference and to *avoid* interference (*Shimura* col. 2, lines 31-36; col. 6, lines 33-39, lines 49-53). By introduction of the control wave, interference avoidance is achieved even in adjacent channels col. 2, lines 35-36). *Shimura* teaches that when interference is detected in a control channel, a switch request is made for another communication

channel (col. 6, line32-42). *Shimura* fails to teach *Applicant*'s claimed first request for communication service and second request for interference monitoring via the maintenance terminal.

As can be seen from the discussion of primary and secondary references above, *Meredith*, *Do*, *Jang* and *Shimura*, alone or in combination, fail to teach or suggest the first request for communication service and second request for interference monitoring via the maintenance terminal, required by claim 4. At least for this deficiency, the Applicant respectfully requests that the members of the Board reverse the rejection of claim 4.

As to the Examiner's assertion of judicial notice of control switching to perform monitoring or testing after which it can be changed to normal communication servicing mode, this subject matter is not the subject matter required by claim 4. The above discussion clearly demonstrates the patentably distinguishable subject matter required by claim 4 and not taught by the references asserted to support "judicial notice". Furthermore the discussion above contains adequate information and argument to create on its face a reasonable doubt regarding the circumstances justifying judicial notice (*In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) *a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice*). Therefore, Applicant respectfully requests that the members of the Board reverse the rejection of claim 4.

Applicant respectfully requests that the members of the Board reverse the rejection of claims 3, and 10-12 at least for their dependence upon an allowable claim (claims 1 and 9, respectively), as set forth above.

C. Claims 6, 7, 10, 13 and 14 are patentable over *Meredith* in view of *Do* or *Jang* and further in view of *Iwata.*

As noted above, claims 6, 7, 10, 13 and 14 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Iwata* (U.S. Patent No. 5,845,209). Applicant respectfully requests that the members of the Board reverse the rejection of claims 6, 7, 10, 13, and 14 at least for their dependence upon an allowable claim (claims 1 and 9, respectively), as set forth above.

D. Claims 6, 7, 10, 13 and 14 are patentable over *Meredith* in view of *Do* or *Jang* and further in view of *Sakamoto.*

As noted above, claims 6, 7, 10, 13 and 14 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Sakamoto, et al.* (U.S. Patent No. 5,408,514). Applicant respectfully requests that the members of the Board reverse the rejection of claims 6, 7, 10, 13, and 14 at least for their dependence upon an allowable claim (claims 1 and 9, respectively), as set forth above.

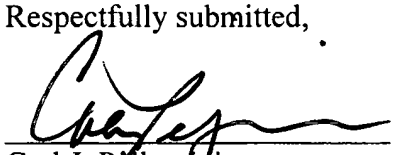
E. Claims 18 and 19 are patentable over *Meredith* in view of *Do* or *Jang* and further in view of *Tayloe et al.*

As noted above, claims 18 and 19 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Meredith* in view of *Do* or *Jang* and further in view of *Tayloe et al.* (U.S. Patent No. 5,095,500). Applicant respectfully requests that the members of the Board reverse the rejection of claims 18 and 19 at least for their dependence upon an allowable claim (claim 1), as set forth above.

Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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Date: August 29, 2006

CLAIMS APPENDIX

CLAIMS 1-19 ON APPEAL:

1. A cellular communication system comprising:

a cell station which provides a communication service for a personal station,

said cell station executing continuous interference monitoring during a requested period;

said cell station receiving said requested period from a maintenance terminal and then producing interference data representative of at least one property of an interfering wave, or said interference data representative of an absence of an interference wave; and

said maintenance terminal requesting said requested period and producing a data record of at least one interference profile based on said at least one property.

2. The cellular communication system according to claim 1, wherein said cell station includes an antenna, and both of said communication service and said continuous monitoring are achieved through said antenna.

3. The cellular communication system according to claim 1, wherein said cell station includes a monitoring unit which continuously monitors an electric field intensity of said interfering wave during said requested period, and

said at least one property includes said electric field intensity.

4. The cellular communication system according to claim 1, wherein said maintenance terminal sends first and second requests, and

said cell station provides said communication service in response to said first request, and monitors said interference data in response to said second request.

5. The cellular communication system according to claim 1, wherein said maintenance terminal displays said at least one interference profile.

6. The cellular communication system according to claim 1, wherein said communication service is executed based on a TDMA system protocol, and

said period includes a slot determined by said TDMA system protocol.

7. The cellular communication system according to claim 6, wherein said cell station checks whether said slot is used for providing said communication service, and continuously monitors said interfering wave during said slot when said slot is not used for providing said communication service.

8. A cellular communication system comprising:

a plurality of cell stations which provide a communication service for a personal station, each of said cell stations continuously monitoring interference during a requested period to produce interference data at least representative of an electric field intensity of an interfering wave;

said cell station receiving said requested period from a maintenance terminal;

said maintenance terminal which requests said requested period and receives said interference data from each of said cell stations, produces a data record of an interference profile and determines an incoming direction of an interfering wave based on said interference data.

9. A method of operating a cellular communication system comprising:

providing a communication service for a personal station by a cell station;

continuously monitoring of an interfering wave during a requested period by said cell station;

requesting of said request period by a maintenance terminal;

said cell station receiving said requested period from a maintenance terminal and then producing an interference data representative of at least one property of an interfering wave; and

producing a data record of an interference profile based on said at least one property.

10. The method according to claim 9, wherein both of providing said communication service and said continuous monitoring are achieved through the same antenna included in said cell station.

11. The method according to claim 9, wherein said continuously monitoring includes an electric field intensity of said interfering wave during said requested period.

12. The method according to claim 9, wherein said continuously monitoring of said interfering wave are exclusively executed in response to said request.

13. The method according to claim 9, wherein said communication service is executed based on a TDMA system protocol, and said period includes a slot determined by said TDMA system protocol.

14. The method according to claim 13, further comprising checking whether said slot is used for providing said communication service, wherein said continuously monitoring is executed during said slot when said slot is not used for providing said communication service.

15. A method of operating a cellular communication system comprising:

providing a communication service for a personal station by a plurality of cell stations;

continuously monitoring of an interfering wave during a requested period by said plurality of cell stations;

requesting said request period by a plurality of maintenance terminals;

said plurality of cell station receiving said requested period from a maintenance terminal and then producing interference data at least representative of electric field intensities of an interfering wave by each of said plurality of cell stations; and

determining an incoming direction of said interfering wave based on said interference data.

16. The cellular communication system according to claim 1, wherein said requesting said requested period is independent of concurrent or impending communication signal transmission.

17. The cellular communication system according to claim 1, wherein said maintenance terminal sends a request for said interference data to said cell station, and

said cell station continuously records said interference data during the requested period, and produces a data record of said at least one interference profile.

18. The cellular communication system according to claim 1, wherein said maintenance terminal displays said at least one property of said interference data in a profile, as a function of at least one variable.

19. The cellular communication system according to claim 1, wherein said cell station includes an interference monitor for acquisition of said interference data.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None